RJA 2/18/22
JS 2/23/22

SAT Report for Case # P-19-0021

General

[redacted]

Report Status: Complete **Status Date:** 12/17/2018

CRSS Date: 11/26/2018 **SAT Date:** 11/27/2018 **SAT Chair:** Doritza Pagan-Rodriguez

Consolidated PMN? Y

Consolidated Set: P-19-0022

Submitter: [redacted]

CAS Number: [redacted]

Ecotox Related Cases:

Health Related Cases: [redacted]

Chemical Name: [redacted]

Use: [redacted]

Analogues (same use): none.

Patents (same use):

none.

Consolidated Set P-19-21-22.

[redacted]

Trade name: [redacted]

PV Max (kg/yr): [redacted]

Ecotox Assessor: Koehrn, Kara **Fate Assessor:** Lee, WenHsiung **Health Assessor:** Surapureddi, Sailesh

Physical Chemical Information

Molecular Weight:	[redacted]	**Physical State - Neat:**	[redacted]		
Percent 500:	[redacted]	**Percent 1000:**	[redacted]		
Melting Point (Measured):		**Melting Point (est):**		**MPD (EPI):**	
Vapor Pressure:		**Vapor Pressure (est):**	<0.000001	**VP (EPI):**	
Water Solubility:		**Water Solubility (EST):**	Dispersible	**Water Solubility (EPI):**	
Log Kow:				**Log Kow (EPI):**	
Log P:		**Log P Comment:**			

SAT Concern

Ecotox Rating (1):	1	**Ecotox Rating Comment (1):**	
Ecotox Rating (2):		**Ecotox Rating Comment (2):**	
Health Rating (1):	1-2	**Health Rating Comment (1):**	
Health Rating (2):		**Health Rating Comment (2):**	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments
3	1	1	

Exposure Based Review (Health)?	
Exposure Based Review (Ecotox)?	N
SAT Keywords:	LUNG, SENS-S

Fate Assessment Summary:	P-19-0021-22 FATE: [redacted] with [redacted] < 500 and [redacted] < 1000 Solid S = Disp. VP < 1.0E-6 torr at 25 °C (E) BP > 400 °C (E) H < 1.00E-8 (E) POTW removal (%) = 90 via sorption Time for complete ultimate aerobic biodeg > mo Sorption to soils/sediments = v.strong PBT Potential: P3B1 *FATE: Migration to ground water = negl
Removal in WWT/POTW (Overall):	90

Condition	Rating Values w/ Rating Description	Comment
WWT/POTW Sorption:	3	
WWT/POTW Stripping:	4	
Biodegradation Removal:	4	
Biodegradation Destruction:		
Aerobic Biodeg Ult:	4	
Aerobic Biodeg Prim:		

Condition	Rating Values w/ Rating Description	Comment
Anaerobic Biodeg Ult:	4	
Anaerobic Biodeg Prim:		
Hydrolysis (t1/2 at pH 7,25C) A:		
Hydrolysis (t1/2 at pH 7,25C) B:		
Sorption to Soils/Sediments:	1	
Migration to Ground Water:	1	
Photolysis A, Direct:		
Photolysis B, Indirect:		
Atmospheric Ox A, OH:		
Atmospheric Ox B, O3:		

Health Assessment

Health Summary: Absorption is nil all routes (pchem).

Concern for lung toxicity from repeated exposures, if inhaled based on information in the SDS. The PMN substance is estimated to be dispersible high-molecular weight polymer. Due to the uncertainty on the water solubility, there is potential for lung overload for the neat PMN material or polymeric species with negligible water solubility ([redacted]).

Concern for skin sensitization based on SDS information.

There are no concerns for the [redacted] counterion or from potential polymer metabolites due to lack of absorption of the PMN substance and very low content of low molecular weight fractions. The PMN substance also has very low reported content ([redacted]) of isocyanate residuals. There is no concern for irritation because the amine FGEW is high [redacted].

	These preliminary information and hazard concerns are comprehensively reviewed in Human Health Form A.
Routes of Exposure:	Dermal , Inhalation

Test Data Submitted

Test Data Submitted:	

Ecotox Assessment

Test organism	Test Type	Test Endpoint	Predicted	Measured	Comments
Fish	96-h	LC50	>100		Predictions are based on SARs for polyamphoteric polymers with [redacted] amine-N (using amine [redacted]) and [redacted]
Daphnid	48-h	LC50	>100		" "
Green Algae	96-h	EC50	>100		" "
Fish	-	Chronic Value	>10		" "
Daphnid	-	Chronic Value	>10		" "
Green Algae	-	Chronic Value	>10		" "

Factors	Most Sensitive Endpoint	Assessment Factor	CoC	Comment
Acute Acquatic:	>100,000	5	20,000	based on predictions for acute fish
Chronic Acquatic:	>10,000	10	1,000	based on predictions for chronic fish

Ecotox Route of Exposure?	No releases to water

Factors	Values	Comments
SARs:	Polyamphoteric Polymers	
SAR Class:	Polymers-amphoteric-dispersible-[redacted]	
TSCA NCC Category?	None	

Recommended Testing

Ecotox Value Comments

Predictions are based on SARs for polyamphoteric polymers with [redacted] amine-N (using amine [redacted]) and [redacted]; MW [redacted] with [redacted] <500 and [redacted] <1000; [redacted] with an unknown MP (P); S = dispersible (P); effective concentrations based on 100% active ingredients and nominal concentrations; hardness <150 mg/L as CaCO3; and TOC <2.0 mg/L.

Ecotox Factors Comments

Environmental Hazard: Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risk because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA determined environmental hazard for this new chemical substance based on SAR predictions for amphoteric polymers (special class within ECOSAR v.2.0). This substance does not fall within a TSCA New Chemicals Category. Acute toxicity values estimated for fish, aquatic invertebrates, and algae are >100 mg/L. Chronic toxicity values estimated for fish, aquatic invertebrates, and algae are >10 mg/L. These toxicity values indicate that the new chemical substance is expected to have low environmental hazard. Application of assessment factors of 5 and 10 to acute and chronic toxicity values, respectively, results in acute and chronic concentrations of concern of 20 mg/L (20,000 ppb) and 1 mg/L (1,000 ppb), respectively.

Environmental Risk: TBD